WHAT IS CLAIMED IS:

1. An refrigerant refill amount calculating apparatus comprising:

a concentration measuring unit which measures component ratios of a mixed refrigerant contained in a refrigerating machine; and

a calculation processing unit which calculates refill amounts of respective refrigerant components which are required to fill a mixed refrigerant having a defined amount in defined component ratios into the refrigerating machine based upon an amount of a refrigerant component which has been additionally filled into the refrigerating machine, and also, a change amount of component ratios which have been measured before and after the refrigerant component was filled.

2. A refrigerant refill amount calculating apparatus as claimed in claim 1, further comprising:

an output unit for instructing the refill amounts of the refrigerant components calculated in said calculation processing unit.

3. A refrigerant refill amount calculating apparatus as claimed in claim 1, wherein said concentration measuring unit includes:

a measuring cell into which the mixed refrigerant is conducted;

an infrared light source irradiating infrared rays

to said measuring cell; and

a detecting unit detecting infrared rays which has passed through said measuring cell.

4. An refrigerant refill amount calculating method comprising the steps of

measuring refrigerant component ratios of a mixed refrigerant filled into a refrigerating machine;

refilling a small amount of refrigerant components;

measuring again refrigerant component ratios of a mixed refrigerant; and

calculating a refill amounts of respective refrigerant components which is required to fill a mixed refrigerant having a defined amount in defined refrigerant component ratios into said refrigerating machine.

5. An refrigerant refill amount calculating method as claimed in claim 4 wherein infrared rays are caused to pass through said mixed refrigerant, and then, penetrated infrared rays are detected so as to obtain the refrigerant component ratios of said mixed refrigerant.